In the Claims:

Please enter the following amended claim set:

1. **(Currently amended)** An orientation system for corrective eye surgery comprising:

means for performing a first image mapping an eye of a patient in a first position using a predetermined eye feature;

means for filtering the first image map to reduce noise;

means for processing the filtered first image map to determine an edge location of the feature in two dimensions;

means for performing a second image mapping of the eye of the patient in a second position different from the first position using the feature;

means for processing the second image map to locate the feature; and

software means for calculating an orientational change to be applied to a corrective surgical procedure to be performed on the eye with the patient in the second position, the procedure comprising a correction profile determined with the patient in the first position.

2. **(Original)** The system recited in Claim 1, wherein the first image mapping performing means comprises a charge-coupled-device camera having means for capturing a video image.

3. **(Original)** The system recited in Claim 1, wherein the first image mapping performing means comprises one of a scanning laser ophthalmoscope and a retinal nerve fiber layer analyzer.

4. **(Currently amended)** The system recited in Claim [[2]] 3, wherein the predetermined eye feature comprises a portion of a blood vessel in a sclera of the eye.

5. **(Canceled)**

6. **(Currently amended)** The system recited in Claim [[5]] 1, wherein the filtering means comprises a Gauss filter.

7. **(Original)** The system recited in Claim 1, wherein the first image map processing means comprises means for defining at least one edge of the predetermined eye feature.

8. **(Original)** The system recited in Claim 7, wherein the defining means comprises means for defining a plurality of edge locations in two dimensions.

9. **(Canceled)**

10. (Original) The system recited in Claim 8, wherein the first image map processing means further comprises means for providing a mapping of edge locations.

11. (Original) The system recited in Claim 10, wherein the mapping providing means comprises a thin function.

12. (Original) The system recited in Claim 1, wherein the predetermined correction profile comprises a desired corneal profile to be achieved with an excimer laser, and the orientational change calculating means comprises means for reorienting a coordinate system of the laser.

13. (Currently amended) An orientation system for corrective eye surgery comprising:

means for performing a first image mapping an eye of a patient in a first position using a predetermined eye feature;

means for filtering the first image map to reduce noise;

means for processing the filtered first image map to determine an edge location of the feature in two dimensions;

means for performing an objective measurement on the eye to determine a desired correction profile for improving visual acuity in the eye;

means for performing a second image mapping of the eye of the patient in a second position different from the first position using the feature;

means for processing the second image map to locate the feature; and

software means for calculating an orientational change to be applied to the correction profile with the patient in the second position.

14. (Currently amended) A method for orienting a corrective program for eye surgery comprising the steps of:

performing a first image mapping of an eye of a patient in a first position using a predetermined eye feature;

filtering the first image map to reduce noise;

processing the filtered first image map to determine an edge location of the feature in two dimensions;

performing a second image mapping of the eye of the patient in a second position different from the first position using the feature;

processing the second image map to locate the feature; and

calculating an orientational change to be applied to a corrective prescription for a surgical procedure to be performed on the eye with the patient in the second position, the procedure comprising a correction profile determined with the patient in the first position.

15. (Original) The method recited in Claim 14, wherein the first image mapping performing step comprises capturing a video image with a charge-coupled-device camera.

16. (Original) The method recited in Claim 14, wherein the first image mapping performing step comprises capturing a video image with one of a scanning laser ophthalmoscope and a retinal nerve fiber layer analyzer.

17. (Original) The method recited in Claim 14, wherein the predetermined eye feature comprises a portion of a blood vessel in a sclera of the eye.

18. (Canceled)

19. (Currently amended) The method recited in Claim [[18]] 14, wherein the filtering step comprises applying a Gauss filter on the first image map.

20. (Original) The method recited in Claim 14, wherein the first image map processing step comprises defining at least one edge of the predetermined eye feature.

21. (Original) The method recited in Claim 14, wherein the defining step comprises defining a plurality of edge locations in two dimensions.

22. (Canceled)

23. (Original) The method recited in Claim 14, wherein the first image map processing step further comprises providing a mapping of edge locations.

24. (Original) The method recited in Claim 23, wherein the mapping providing step comprises applying a thin function to the first image map.

25. (Original) The method recited in Claim 14, wherein the corrective surgical procedure comprises a desired corneal profile to be achieved with an excimer laser, and the orientational change calculating step comprises reorienting a coordinate system of the laser.

26. (Currently amended) A method of aligning an eye, comprising the steps of:

(a) obtaining a first image of an eye, the eye being in a first position;

(b) locating a feature of the eye in the first image, the feature comprising one of a sclera blood vessel, a retinal blood vessel, and a retinal nerve;

(c) obtaining a second image of the eye with the eye in a second position, the second position being different from the first position;

(d) locating the feature of the eye in the second image;

(e) comparing the location of the feature in the first position to the location of the feature in the second position; and

(f) calculating a change in orientation of the eye from the first position to the second position based on the comparison of the of the location of the feature in the first position to the location of the feature in the second position.

27-29. (Canceled)

30. (Original) The method recited in Claim 26, wherein the first image and the second image are obtained by a charge-couple-device camera.

31. (Original) The method recited in Claim 26, wherein the first image and the second image are obtained using a scanning laser ophthalmoscope.

32. (Original) The method recited in Claim 26, wherein the first image and the second image are obtained using a retinal nerve fiber layer analyzer.

33. (Currently amended) A method of performing laser refractive correction on an eye comprising the steps of:

(a) obtaining a first image of an eye, the eye being in a first position;

(b) locating a feature of the eye in the first image, the feature comprising one of a sclera blood vessel, a retinal blood vessel, and a retinal nerve;

(c) calculating a laser shot pattern based on the first image of the eye;

(d) obtaining a second image of the eye with the eye in a second position, the second position being different from the first position;

(e) locating the feature of the eye in the second image;

(f) comparing the location of the feature in the first position to the location of the feature in the second position;

(g) calculating a change in orientation of the eye from the first position to the second position based on the comparison of the of the location of the feature in the first position to the location of the feature in the second position; and

(h) adjusting the shot pattern of the laser based on the calculated change in orientation of the eye from the first position to the second position.

34-36. (Canceled)

37. (Currently amended) The method recited in Claim 33, wherein the first image and the second image are obtained by a ~~charge-couple-device~~ charge-coupled-device camera.

38. (Original) The method recited in Claim 33, wherein the first image and the second image are obtained using a scanning laser ophthalmoscope.

39. (Original) The method recited in Claim 33, wherein the first image and the second image are obtained using a retinal nerve fiber layer analyzer.